MEAN REVERSION, IN THE SIMPLEST TERMS

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WHITE PAPERS

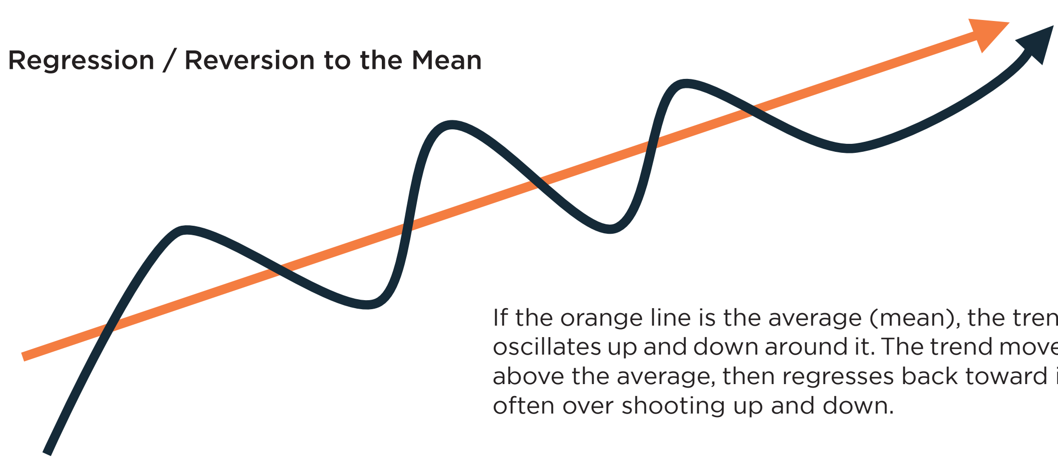
WEALTHMANAGEMENT

Google 'mean reversion,' I dare you. You'll get everything from the most complicated academic mathematical studies to people claiming it's hocus pocus to those who swear it's the holy grail of investing.

So, just what is 'mean reversion'? Wikipedia defines it as "the assumption that a stock's price will tend to move to the average price over time." But do you want an even simpler, more real-life example? OK, say a stock is at $20, bad news comes out, and it goes to $10 over a few days. Is there an opportunity to buy it at $10, sell it at $15, and reap a 50% gain? We think so.

Let's start at the top. The market overreacts to everything. If the news is bad, investors see the stock going to zero. If its good news, they see the stock going to $10,000. And it isn't just concentrated to individual equities.

Regression / Reversion to the Mean



If the orange line is the average (mean), the trend oscillates up and down around it. The trend moves above the average, then regresses back toward it, often over shooting up and down.

MEAN REVERSION CONTINUED ON P2

MEAN REVERSION CONTINUED

Look at some of the single largest market-move days on the S&P 500:

On September 29, 2008, the S&P 500 lost 106.85 points. That's a single day drop of 8.81%. Two weeks later, on October 13, it bounced back with a 104.13-point gain, or 11.58%. If that wasn't enough of a recovery for you, the S&P 500 added another 91 points, or 10.79%, on October 28.

Does everyone remember the technology bubble of 2000? Well, it reached a crescendo on March 16, 2000, with a 66-point gain, still the third highest daily gain in the last 50 years on the S&P 500. This was followed up by an 84-point decline on April 14, the third largest decline in the last 50 years. Both moves happened all within one month.

Over the last two months, in our monthly white papers we have tried our best to debunk investing. For investing is not that complicated—human emotions are.

In June, we wrote about "Time in the Market, Not Market Timing", which emphasized that, if you have a plan and are patient and disciplined in your approach to investing, then money is virtually assured to be made. Was there a difference between investing on the best day of the year and the worst? Sure. Was it enough for someone to regret their decision? No way. The results were 8.82% vs 6.58% over 20 years. If you look at 10-year rolling periods in the S&P 500, there are 80 points to review, and 75 of those 80 resulted in positive returns if you had a 10-year time horizon. Those numbers dropped to 65 positive and 24 negative periods if your time horizon was one year.

In July, we examined investor behavior and an investor's virtually perfect penance if acting on their own for selling at the low and locking in a loss. We highlighted that the average mutual fund in a 10-year period had a 9% return while investors in those funds had returns of less than 3%, that fear was greater than greed, and that nearly every investor feels that zero is in play when things turn south.

This month, we are discussing the finer points of investing and looking at where "select, measured" opportunities could be taken advantage of from either an individual equity standpoint, or even a sector play, based on mean reversion.

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MEAN REVERSION CONTINUED ON P3

S&P 500 Sector Performance

2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
ENRS 34.4%	CONS -15.4%	INFT 61.7%	REAL 32.3%	UTIL 19.9%	FINL 28.8%	COND 43.1%	REAL 30.2%	COND 10.1%	ENRS 27.4%
MATR 22.5%	HLTH -22.8%	MATR 48.6%	COND 27.7%	CONS 14.0%	COND 23.9%	HLTH 41.5%	UTIL 29.0%	HLTH 6.9%	TELS 23.5%
UTIL 19.4%	UTIL -29.0%	COND 41.3%	INDU 26.7%	HLTH 12.7%	REAL 19.7%	INDU 40.7%	HLTH 25.3%	CONS 6.6%	FINL 22.8%
INFT 16.3%	TELS -30.5%	REAL 27.1%	MATR 22.2%	REAL 11.4%	TELS 18.3%	FINL 35.6%	INFT 20.1%	INFT 5.9%	INDU 18.9%
CONS 14.2%	COND -33.5%	S&P 26.5%	ENRS 20.5%	TELS 6.3%	HLTH 17.9%	S&P 32.4%	CONS 16.0%	REAL 4.7%	MATR 16.7%
INDU 12.0%	ENRS -34.9%	INDU 20.9%	TELS 19.0%	COND 6.1%	S&P 16.0%	INFT 28.4%	FINL 15.2%	TELS 3.4%	UTIL 16.3%
TELS 11.9%	S&P -37.0%	HLTH 19.7%	S&P 15.1%	ENRS 4.7%	INDU 15.4%	CONS 26.1%	S&P 13.7%	S&P 1.4%	INFT 13.9%
HLTH 7.2%	INDU -39.9%	FINL 17.2%	CONS 14.1%	INFT 2.4%	MATR 15.0%	MATR 25.6%	INDU 9.8%	FINL -1.5%	S&P 12.0%
S&P 5.5%	REAL -42.3%	CONS 14.9%	FINL 12.1%	S&P 2.1%	INFT 14.8%	ENRS 25.1%	COND 9.7%	INDU -2.5%	COND 6.0%
COND -13.2%	INFT -43.1%	ENRS 13.8%	INFT 10.2%	INDU -0.6%	CONS 10.8%	UTIL 13.2%	MATR 6.9%	UTIL -4.8%	CONS 5.4%
REAL -17.9%	MATR -45.7%	UTIL 11.9%	UTIL 5.5%	MATR -9.6%	ENRS 4.6%	TELS 11.5%	TELS 3.0%	MATR -8.4%	REAL 3.4%
FINL -18.6%	FINL -55.3%	TELS 8.9%	HLTH 2.9%	FINL -17.1%	UTIL 1.3%	REAL 1.6%	ENRS -7.8%	ENRS -21.1%	HLTH -2.7%

Abbr.	Sector Index	Annual	Best	Worst
COND	S&P 500 Consumer Discretionary Index	9.64%	43.1%	-33.5%
CONS	S&P 500 Consumer Staples Index	10.14%	26.1%	-15.4%
ENRS	S&P 500 Energy Index	4.3%	34.4%	-34.9%
FINL	S&P 500 Financials Index	-0.36%	35.6%	-55.3%
HLTH	S&P 500 Health Care Index	9.58%	41.5%	-22.8%
INDU	S&P 500 Industrials Index	7.79%	40.7%	-39.9%
INFT	S&P 500 Information Technology Index	9.93%	61.7%	-43.1%
MATR	S&P 500 Materials Index	6.06%	48.6%	-45.7%
REAL	S&P 500 Real Estate Index	4.29%	32.3%	-42.3%
TELS	S&P 500 Telecommunication Services Index	6.39%	23.5%	-30.5%
UTIL	S&P 500 Utilities Index	6.98%	29.0%	-29.0%
S&P	S&P 500 Index	6.94%	32.4%	-37.0%

Past performance does not guarantee future returns. The historical performance is meant to show changes in market trends across the different S&P 500 sectors over the past ten years. Returns represent total annual returns (reinvestment of all distributions) and does not include fees and expenses. The investments you choose should reflect your financial goals and risk tolerance. For assistance, talk to a financial professional. All data are as of 12/31/16.

The above chart shows the performance results of 12 sectors within the S&P 500. Energy was the worst-performing sector in 2014 and 2015, and then the best in 2016. Real estate went from third to last to first in 2012, 2013 and 2014. Health Care had a good run: second, third, and second again in 2013, 2014 and 2015, and then last in 2016, and it's #1 YTD in 2017 (as of July 6, 2017). At WT Wealth Management, we believe this epitomizes mean reversion.

Do we pick sectors based on this? Sometimes. It's simply one of the dozen or so tools we use to try to place our investors in areas we believe have the best chance of success with, in our opinion, as little downside as possible.

MOST INVESTORS CONTINUED ON P4

MOST INVESTORS CONTINUED

In short, nothing stays up or down forever. Often the biggest loser one year is the biggest winner the next, and the biggest winner frequently becomes the biggest loser. That's the essence of mean reversion. A 5-, 10- or 15-year chart makes it look like a smooth ride, but in reality it never is. Unforced errors and missed opportunities present themselves every day. This harkens back to our incessant talk of having a plan and knowing your risk tolerance and real objectives.

The same opportunities present themselves in the individual equity world almost daily, and especially around earnings season. In our more aggressive accounts, where investors want speculation, we use a strategy of buying when "blood is in the streets". Not a game for the faint of heart, mean reversion requires knowledge, discipline and patience.

Consider Palo Alto Networks. (The chart is below.) Tech companies like Palo Alto trade based significantly on earnings and earnings guidance. They also trade at high price to earnings (PE), which make them even more volatile. Earlier this year it had one of those instances and fell from the $150/$155 range to $115 in a few trading days. Then, by June, good news surfaced, and the stock rallied back to the mid $130's.

Does it always work like this? Heck no. It could take you months or years to capture your return. Again, as I stated earlier, mean reversion is one of a dozen tools we use for trading individual equities. In this case, we did buy Palo Alto under $112 and sold half our position above $135, a nifty 20% gain on that trade.

CONCLUSION

It should be no secret—investors, speculators and trades overdo everything. Nothing is as bad or as good as we all would be led to believe.

Mean reversion is a real tool on both the upside and the downside. It's one reason why we at WT Wealth Management constantly fade winners by selling and taking profits. It's also a reason why we may be buying stocks on a day when people question our sanity. Human nature is funny. Many people would feel better buying a stock that had gone from $10 to $20, than from $20 to $10.

Read that last sentence over and over again. It's human nature at its best—or maybe its worst.

SOURCES

Graham, B. (2017). *Annual S&P sector performance. Novel Investor. Retrieved from https://novelinvestor.com/sector-performance*

Heilner, J. (2017). *Most investors acting on their own fail to capture market returns. WT Wealth Management July 2017 White Papers. Retrieved from https://www.wtwealthmanagement.com*

Manuel, D. (2017). *S&P 500 historical data. DaveManuel.com. Retrieved from http://www.davemanuel.com/sp500-historical-data.php*

Nasdaq. (2017). *Palo Alto Networks, Inc., stock chart. Nasdaq.com. Retrieved from http://www.nasdaq.com/symbol/panw/stock-chart*

Overstreet, T. *(2016). Using binary options to trade mean reversion in the stock market. Nadex: All About the Binaries. Retrieved from https://www.benzinga.com/general/education/16/04/7863027/using-binary-options-to-trade-mean-reversion-in-the-stock-market*

Shell, M. (2017). *Regression toward the mean (mean reversion). ASYMMETRY® Observations. Retrieved from https://asymmetryobservations.com/definitions/countertrend/regression-toward-the-mean*

Wikipedia. (2016). *Mean reversion (finance). Wikipedia, The Free Encyclopedia. Retrieved from https://en.wikipedia.org/wiki/Mean_reversion_(finance)*

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